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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,634	08/21/2003	Michael Stuart Robbins	89205.0011	9781

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EXAMINER	
TRAN, DZUNG D	

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 10/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/646,634	ROBBINS ET AL.	
	Examiner	Art Unit	
	Dzung D. Tran	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 August 2006*.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-13,15 and 17-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6, 12, 13, 15 & 17-19* is/are rejected.

7)☒ Claim(s) *8-11* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-3 recite the limitation "said bandpass filter" in line 12 of claim 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 4, 6, 12, 13, 15, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Du et al. (U.S. Patent no. 6,107,938) in view of Barfod (U.S. Patent no. 5,539,393).

Regarding claims 4 and 12, Du discloses in figure 5, an interference resistant infrared communication system, comprising:

an infrared detector 88 (col. 9, lines 57-58) for receiving an infrared optical communication signal (col. 9, line 57);

an amplifier 84 (col. 9, line 59), coupled to the infrared detector 88, for amplifying an electrical signal generated by the infrared detector 88;

a bandpass filter (e.g., infrared filter 60), coupled to the infrared detector 88, and having a center wavelength for permitting home and office infrared control system signals to substantially pass through the filter while substantially preventing interfering signals from reaching the infrared detector (col. 11, lines 19-23); and

an infrared light emitter 92 (col. 9, line 24), coupled to the amplifier 84, for emitting a signal in response to an electrical signal generated by the infrared detector 88.

Du differs from claims 4 and 12 of the present invention in that Du does not specifically disclose a bandpass filter passes light falling within a wavelength range of 920nm to about 980nm.

Barfod discloses a bandpass filter passes light within a wavelength range of about 950nm to about 1600nm (col. 9, lines 11-13). At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the bandpass filter taught by Barfod in the optical communication system of Du. One of the ordinary skill in the art would have been motivated to do this in order to provide an optical filter with a very high finesses to filter-out extremely narrow bandwidth wavelengths of light energy and to reduce sensitivity to external perturbations such as noise to improve the stability of the system.

Regarding claim 13, Du discloses the infrared detector 88 comprises at least one infrared photodetector (col. 9, lines 57-58).

Regarding claim 15, Du discloses the filter 60 further comprises an electromagnetic interference screen (col. 11, lines 19-23).

Regarding claim 17, Du discloses a method for communicating, comprising:

an infrared detector 88 (col. 9, lines 57-58) for detecting an infrared electromagnetic communication signal and converting the infrared electromagnetic communication signal to an electrical signal;

an amplifier 84 (col. 9, line 59) for amplifying the electrical signal;

a bandpass filter (e.g., infrared filter 60) for filtering all signals outside of a frequency band used by home and office infrared control system signals from the infrared electromagnetic communication signal prior to detecting the infrared electromagnetic communication signal (col. 11, lines 19-23);

an infrared light emitter 92 (col. 9, line 24) for emitting an infrared electromagnetic signal in response and corresponding to the electrical signal, wherein a desired infrared optical communication signal is substantially converted to an electrical signal while interfering signals are substantially prevented from being converted to an electrical signal (col. 9, lines 57-58).

Du differs from claims 4 and 12 of the present invention in that Du does not specifically disclose a bandpass filter passes light falling within a wavelength range of 920nm to about 980nm.

Barfod discloses a bandpass filter passes light within a wavelength range of about 950nm to about 1600nm (col. 9, lines 11-13). At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate

the bandpass filter taught by Barfod in the optical communication system of Du. One of the ordinary skill in the art would have been motivated to do this in order to passes light falling within a wavelength range of 920nm to about 980nm and provide an optical filter with a very high finesses to filter-out extremely narrow bandwidth wavelengths of light energy and to reduce sensitivity to external perturbations such as noise to improve the stability of the system.

Regarding claims 6 and 19, Figure 5 clearly shown the amplifier 84 for amplifying the electrical signal that is converted the infrared signal by the infrared detector 88. Thus, it is inherently that the sensitivity of the amplifier 84 is increased such that the sensitivity of the receiver is increased with respect to the impinging infrared light.

5. Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Du et al. (U.S. Patent no. 6,107,938) in view of Barfod (U.S. Patent no. 5,539,393) and further in view of Mc Guire (U.S. Patent no. 6,114,684).

Regarding claims 5 and 18, as per claims above, Du discloses all the limitations except for more than one photodetector is used to increase the sensitivity of the receiver to the impinging infrared light. Mc Guire discloses in figure 7, a plurality of photodiode detectors, each detector has a filter 24 for passing light within a predetermined frequency range. At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the plurality photodetector taught by Mc Guire in the optical communication system of Du and Barfod. One of the ordinary skill in the art would have been motivated to do this in order

for the receiving unit to receive a plurality of infrared light having different frequency range. Thus, it increases the sensitivity of the receiver to the impinging infrared light.

6. Claims 8-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 1-3 would be allowable if rewritten to overcome the 35 U.S.C. 112 Rejection above.

Response to Arguments

8. Applicant's arguments with respect to claims 4-6, 12, 13, 15 and 17-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung Tran whose telephone number is (571) 272-3025.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Jason Chan, can be reached on (571) 272-3022.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Dzung Tran

DZUNG TRAN
PRIMARY PATENT EXAMINER

10/20/2006